

## COLOR PRINTER CALIBRATION

### Abstract of the Disclosure

The present invention addresses the quantification of a  
5 printed tone scale for each individual color in a printing system, developing a  
linear tone scale derived in an independent color space and referenced from the  
shade of the unprinted substrate. The present invention determines the  
threshold for excessive ink coverage of a printing system on a specified  
substrate. This determination is based on a subjective evaluation of acceptable  
10 thresholds for bleed, cockle, show through, and image density. The method  
works in conjunction with a predefined test pattern printed on the specified  
substrate at fixed printing parameters, such as speed, dryer temperature, and  
web tension. This invention also includes an ability to limit the ink of each  
independent color in the system as a fraction of the total upper ink limit.  
15 Furthermore, this invention allows calibration of the tone scale of each color in  
the system using the color of the paper as a reference point. In addition, this  
invention facilitates the generation of separate sets of tone scale  
transformations for both graphics and text for each color in the system.